

CLAIMS

1. A process for producing an oxide-dispersion strengthened platinum material where zirconium oxide is
5 finely dispersed in platinum, wherein
powdered platinum is poured into water to prepare a platinum suspension;
a zirconium nitrate solution and an urea solution are added in the platinum suspension for adjusting the suspension
10 to a given pH to precipitate zirconium hydroxide and thus to form a zirconium hydroxide carrying platinum;
the zirconium hydroxide carrying platinum is collected, which is then formed into a molding;
the molding is sintered and forged under the conditions
15 whereby secondary recrystallization growth in a platinum crystal proceeds, to form a platinum ingot; and
the platinum ingot is cold-rolled in a processing rate of at least 70% and then the product is thermally recrystallized.
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2. The process for producing an oxide-dispersion strengthened platinum material according to Claim 1 wherein the powdered platinum is thermally treated in advance.
- 25 3. The process for producing an oxide-dispersion strengthened platinum material according to Claim 1 or 2 wherein a zirconium nitrate solution is added to the platinum

suspension; the suspension is heated to boiling while being stirred; an urea solution is added to the suspension; the resulting suspension is further kept boiling for a certain period; and then heating is stopped.

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4. The process for producing an oxide-dispersion strengthened platinum material according to Claim 1 or 2 wherein a zirconium nitrate solution and an urea solution are added to a platinum suspension; the suspension is kept at 80°C or higher while being stirred to adjust the suspension to a predetermined pH; the suspension is further kept at 80°C or higher for a certain period; and then heating is stopped.

5. The process for producing an oxide-dispersion strengthened platinum material according to any of Claims 1 to 4 wherein pH is adjusted to 4.5 to 11.0.

6. The process for producing an oxide-dispersion strengthened platinum material according to any of Claims 1 to 5 wherein the platinum used for preparing the platinum suspension are powders with a particle size of 0.05 to 10 μm .

7. The process for producing an oxide-dispersion strengthened platinum material according to any of Claims 1 to 6 wherein sintering is conducted at 1000 to 1400°C.

8. The process for producing an oxide-dispersion strengthened platinum material according to any of Claims 1 to 7 wherein forging is conducted after heating at 1100 to 1400°C.